

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 22, 2009 has been entered.

### ***Response to Amendment***

Applicant's amendment to the claims filed September 22, 2009. Claims 6, 12, 15 and 20-22 are currently amended. Claims 1-5, 7-11, 13, 14 and 16 have been canceled. Claims 6, 12, 15 and 17-22 are pending and under examination. It is noted that the REMARKS recite claim 21 has been canceled. However, claim 21 is currently amended.

### ***Specification***

The amendment filed September 22, 2009 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: see the 35 USC 112, first paragraph rejection of claims 6 and 20 below.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6, 12, 15 and 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 6 and 20 recite the conduit is a "breathing" conduit. There does not appear to be support for this limitation in the original disclosure. In particular, it is noted that the instant disclosure appears to teach against a "breathing" conduit as the conduit in some applications would be required to transport materials such as a gas through it. Further, regarding claim 6, the claim recites a "thin", "plastic" film. There does not appear to be support in the original disclosure for the "thin" and "plastic" limitation.

Claim 21 recites the "cuff is injected onto said conduit at a lower temperature than said hot molten plastic that is injected onto said cuff to form said connector". It is unclear where support for this limitation may be found in the original disclosure. The examiner notes that he has reviewed the paragraphs set forth in the REMARKS that are intended to provide support for these new limitations, but has not found support at these locations or elsewhere in the specification. This rejection may be overcome by pointing to the specific location within the specification where support for these limitations may be found or by canceling or appropriately amending the claims. Claims 12, 15, 17-19 and 22 are rejected as dependent claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 12, 15 and 17-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 6, the claim recites an "outer wall" is formed from a "thin" film. Further, claim 20, recites the conduit is "thin-walled". The examiner submits that the limiting effect of the term "thin" is unclear and that the term is essentially a relative term. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 12, 15, and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godeau (US 5,749,995) in view of Uchiyama et al. (US 6,334,615).

Regarding claim 6, Godeau teaches a method of producing a watertight coupling between a tube and an endpiece comprising providing a tube (10) made of plastic or elastomer (col. 3, lines 52-54) (i.e. a flexible conduit); injection molding an elastomer/soft rubber onto the conduit adjacent to the end of the conduit to form an annular portion (16)/cuff (Figure 8; col. 5, lines 51-55; col. 6, lines 1-11; claims 3 and 4); and subsequently injection molding a plastic, such as polyamide, over the annular portion (16)/cuff to form a ring (13)/connector (Figure 9; col. 5, lines 15-18), wherein the annular portion (16)/cuff shields the tube (10)/conduit from injected plastic to prevent damage to the tube/conduit (Figure 1 and Figure 9). Godeau does not teach the plastic is injected at a higher temperature than the melting point of the rubber/elastomer. However, Uchiyama et al. teach an injection molding process wherein a flexible resin (e.g. an elastomer, col. 4, line 43) and a rigid resin (e.g. a polyamide, col. 3, line 55) are separately injected and wherein the rigid resin is injected at a higher temperature than the melting point of the flexible resin in order to melt the flexible resin at the interface and form a unitary body having a strong fusion bond between the two materials (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Godeau and to have injected the plastic at a higher temperature than the melting point of the rubber/elastomer, as suggested by Uchiyama et al., for the purpose, as suggested by Uchiyama et al., of forming a strong bond between the two materials.

As to claim 12, Godeau employs an elastomer/rubber material for the annular portion (16)/cuff. As such, to the extent set forth in the claim, the material is understood to be deformable, relieve stress and generally permit movement relative to the connector.

As to claim 15, Godeau employs a polyamide, for example, as the ring (13)/connector portion. The ring (13)/connector is compatible with other parts (Figure 1).

As to claims 17, Uchiyama et al. teach the rigid resin has a melting point higher than the melting point of the flexible resin and inject the rigid resin at a temperature sufficient to cause the cuff to melt at the interface (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40). It would have been obvious to one having ordinary skill to have employed resins having the melting temperature relationship as claimed for the same reasons set forth above in the rejection of claim 6.

As to claim 18, Godeau teach the connector/ring is molded over the cuff/annular portion toward the end of the conduit and the cuff/annular ring extends out of an inner end of the connector away from the end of the conduit (Figure 1 and Figure 12).

As to claim 19, the cuff/annular portion of Godeau prevents contact between the plastic and the tube/conduit behind the cuff/annular portion (Figure 1).

Regarding claim 20, Godeau teaches a method of producing a watertight coupling between a tube and an endpiece comprising providing a tube (10) made of plastic or elastomer (col. 3, lines 52-54) (i.e. a flexible conduit); injection molding an elastomer/soft rubber onto the conduit adjacent to the end of the conduit to form an annular portion (16)/cuff (Figure 8; col. 5, lines 51-55; col. 6, lines 1-11; claims 3 and 4); and subsequently injection molding a plastic, such as polyamide, over the annular portion (16)/cuff to form a ring (13)/connector (Figure 9; col. 5, lines 15-18), wherein the annular portion (16)/cuff insulates and prevents contact between tube (10)/conduit and the molten plastic where the annular portion (16)/cuff is located

(Figure 1). Godeau does not teach the plastic is injected at a higher temperature than the melting point of the rubber/elastomer. However, Uchiyama et al. teach an injection molding process wherein a flexible resin (e.g. an elastomer, col. 4, line 43) and a rigid resin (e.g. a polyamide, col. 3, line 55) are separately injected and wherein the rigid resin is injected at a higher temperature than the melting point of the flexible resin in order to melt the flexible resin at the interface and form a unitary body having a strong fusion bond between the two materials (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Godeau and to have injected the plastic at a higher temperature than the melting point of the rubber/elastomer, as suggested by Uchiyama et al., for the purpose, as suggested by Uchiyama et al., of forming a strong bond between the two materials.

As to claim 21, Godeau do not teach the claimed temperature relationship. However, Uchiyama et al. teach an injection molding process wherein a flexible resin (e.g. an elastomer, col. 4, line 43) and a rigid resin (e.g. a polyamide, col. 3, line 55) are separately injected and wherein the rigid resin is injected at a higher temperature than the melting point of the flexible resin in order to melt the flexible resin at the interface and form a unitary body having a strong fusion bond between the two materials. Additionally, Uchiyama et al. teach the rigid resin has a melting point higher than the melting point of the flexible resin and inject the rigid resin at a temperature sufficient to cause the cuff to melt (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Godeau and to have injected the rubber/elastomer and the plastic layers at temperatures corresponding to their melt

temperatures such that the cuff is injected at a lower temperature than the connector, as suggested by Uchiyama et al., for the purpose, as suggested by Uchiyama et al., of forming a strong bond between the two materials and for the additional purposes of saving energy by avoiding overheating the resins and avoiding unnecessary heat history/degradation of the resins.

As to claim 22, Godeau employs an elastomer/rubber material for the annular portion (16)/cuff. As such, to the extent set forth in the claim, the material is understood to be deformable, relieve stress and generally permit cushioning.

### ***Response to Arguments***

Applicant's arguments filed September 22, 2009 have been fully considered, but they are not persuasive. Applicant argues that the conduit 10 of Godeau is not a thin plastic film or thin-walled. This argument is not persuasive. The examiner submits the tube 10 of Godeau is quite reasonably considered to be a "thin film"/"thin-walled" as there is no specific limit set forth in the claims or the specification as to how thin the wall/film is required to be (also see the 35 USC 112, second paragraph rejection above). Further, the examiner submits that it would be improper to read limitations into the claims that are not necessarily required. For example, it would be improper to read into the "outer wall formed from a thin plastic film"/"thin-walled" limitations that the claim is directed to a flexible conduit wherein the flexible conduit is a double-walled helically wound flexible conduit having an outer wall comprising a film/ribbon, an inner wall, and which includes at least one electrical conductor wrapped around said inner wall which is covered with a bead and wherein the rubber which forms the cuff blends with the outer wall and the bead. In fact, as set forth in the original disclosure (paragraph [0031], a delivery conduit for respiratory/ventilation therapy is only a preferred embodiment of the instant invention and the

claims are not positively limited to such an application (e.g. no step reciting installing the flexible conduit as an air delivering conduit in a ventilation therapy system). Further still, in general terms, absent a specific amendment, the tube of Godeau is a "delivery conduit" under a reasonable interpretation of the term. Finally, it is noted that Godeau makes it clear the invention is not limited to engine compartments of motor vehicles (col. 1, lines 12-15). As such, the examiner maintains that Godeau is applicable to the claims, as presented, as set forth above in the body of the rejection, and that the claims would need to be amended to overcome the rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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/Jeff Wollschlager/

Primary Examiner

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